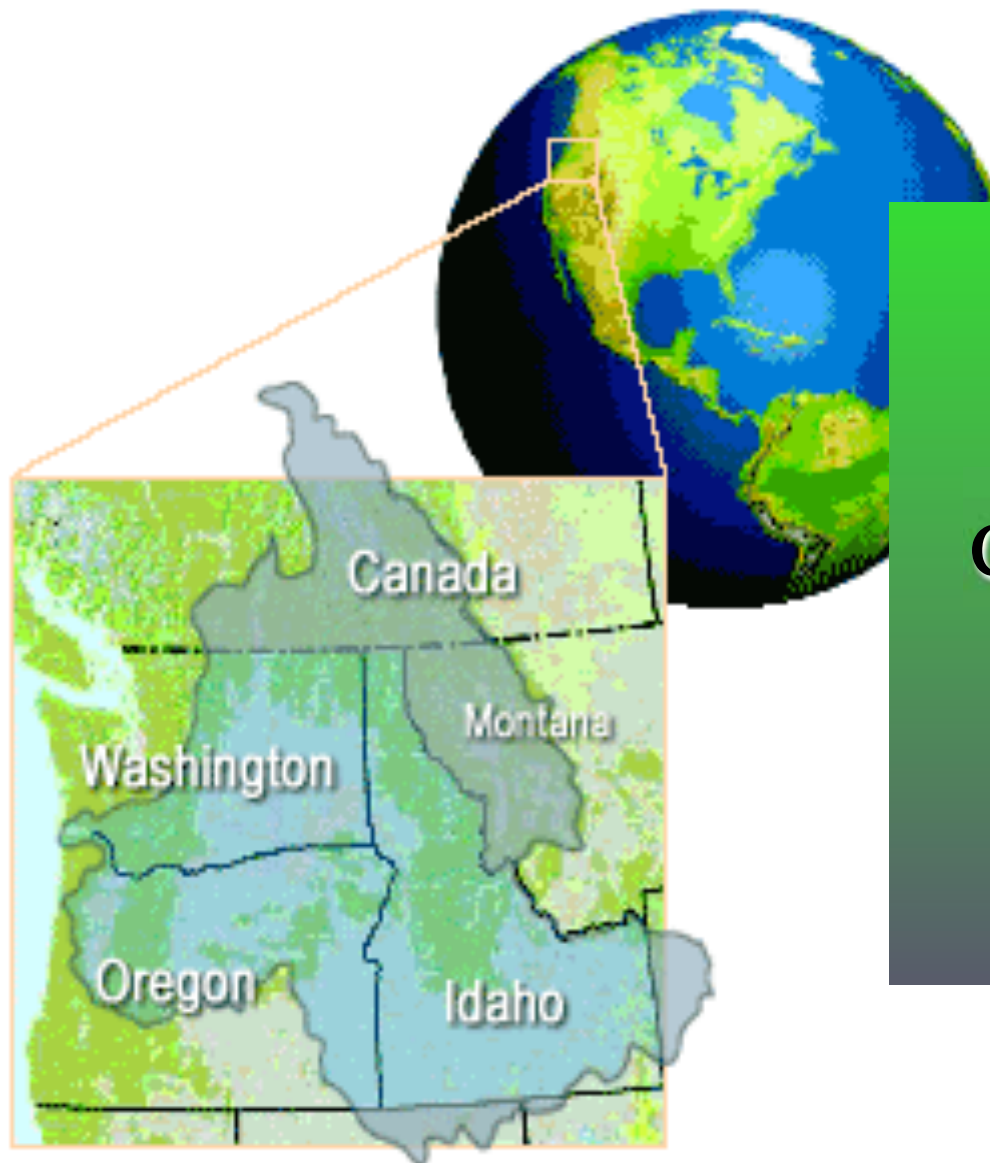


Adaptation initiatives in Washington and Oregon

Philip Mote
Oregon Climate Change Research Institute



Science informing decisions: The Pacific Northwest Climate Impacts Group

Steps to adaptation

- Awareness

MR.
GROUNDHOG!

click whirrr
click
click
click

DID YOU
SEE ANYTHING?

click
whirrr

click
click
whirrr

EARLY SPRING,
RIGHT, MR.
GROUNDHOG?

CLIMATE
INSTITUTE

WELL, IT
WAS WORTH
A TRY.

Global
Warming
Data

CAN YOU WIGGLE -
YOUR NOSE?

TOLES

UNIVERSAL PAPER SUPPLY
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2/4/99

15

Steps to adaptation

- Awareness
- Analysis
- Action

Washington

- 2005: King County
- 2007: Executive order 07-02
- 2007: HB1303
- 2009: E2SSB 5560

King County

- 2005 adaptation conference
- 2008 Guidebook for local governments
- shoreline analysis
- investments in retrofitting infrastructure



The Future Ain't What It Used To Be Planning for Climate Disruption

Thursday, October 27, 2005, 7:00 a.m. - 5:00 p.m.
Qwest Field Conference Center, Seattle, WA



- 600+ attendees hear science and begin strategizing methods of preparing for/adapting to climate changes

Breakout Topics:

- agriculture
- coastal areas
- fish/shellfish
- flooding/stormwater/wastewater
- forestry
- hydropower
- municipal water supply



- C. Washington Climate Change Challenge shall address the following elements and process steps:
- i) Consider the full range of policies and strategies for the state of Washington to adopt or undertake to ensure the economic and emission reductions goals are achieved, including policy options that can maximize the efficiency of emission reductions including market-based systems, allowance trading, and incentives;
 - ii) Determine specific steps the state of Washington should take to prepare for the impact of global warming, including impacts to public health, agriculture, the coast line, forestry, and infrastructure;
 - iii) Assess what further steps the state of Washington should take to be prepared for the impact of global warming to water supply and management;
 - iv) Initiate active involvement by the state of Washington in the development of regional and national climate policies and coordination with British Columbia;
 - v) Recommend how the state of Washington, as an entity, can reduce its generation of greenhouse gas emissions;
 - vi) Work with the state of Washington's local governments to maximize coordination and effectiveness of local and state climate initiatives; and
 - vii) Inform the general public of the process, solicit comments and involvement and develop recommendations for future public education and outreach.

Leading the Way on Climate Change: The Challenge of Our Time



Interim Report



Recommendations

- Enhance emergency preparedness
- Incorporate climate change into planning
- Restore and protect natural systems
- Improve water supply and management
- Build institutional capacity and knowledge
- Manage and share best available data
- Educate, inform, and engage stakeholders

State Climate Impacts Assessment – Sector Objectives

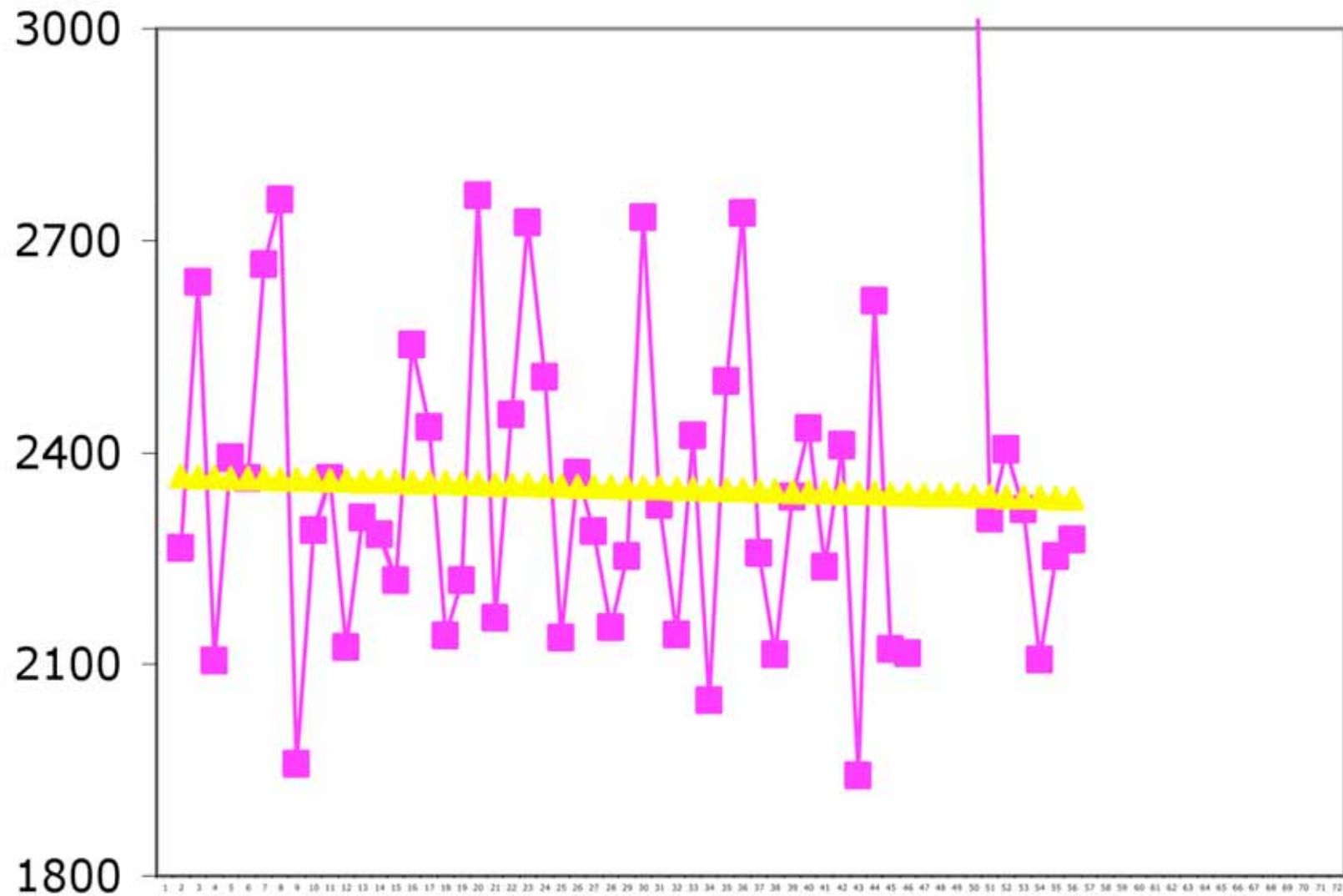
- Climate Scenarios
- Hydrology and Water Resources
- Agriculture -New
- Salmon
- Forests
- Coasts
- Human Health -New
- Infrastructure -New

HB1303

E2SSB 5560

- The Departments of ... shall develop an integrated climate change response strategy to better enable state and local agencies, public and private businesses, nongovernmental organizations, and individuals to prepare for, address, and adapt to the impacts of climate change. The integrated climate change response strategy should be developed, where feasible and consistent with the direction of the strategy, in collaboration with local government agencies with climate change preparation and adaptation plans.
- By December 1, 2011, the department of ecology shall compile an initial climate change response strategy,

Bellingham DJF heating degree days



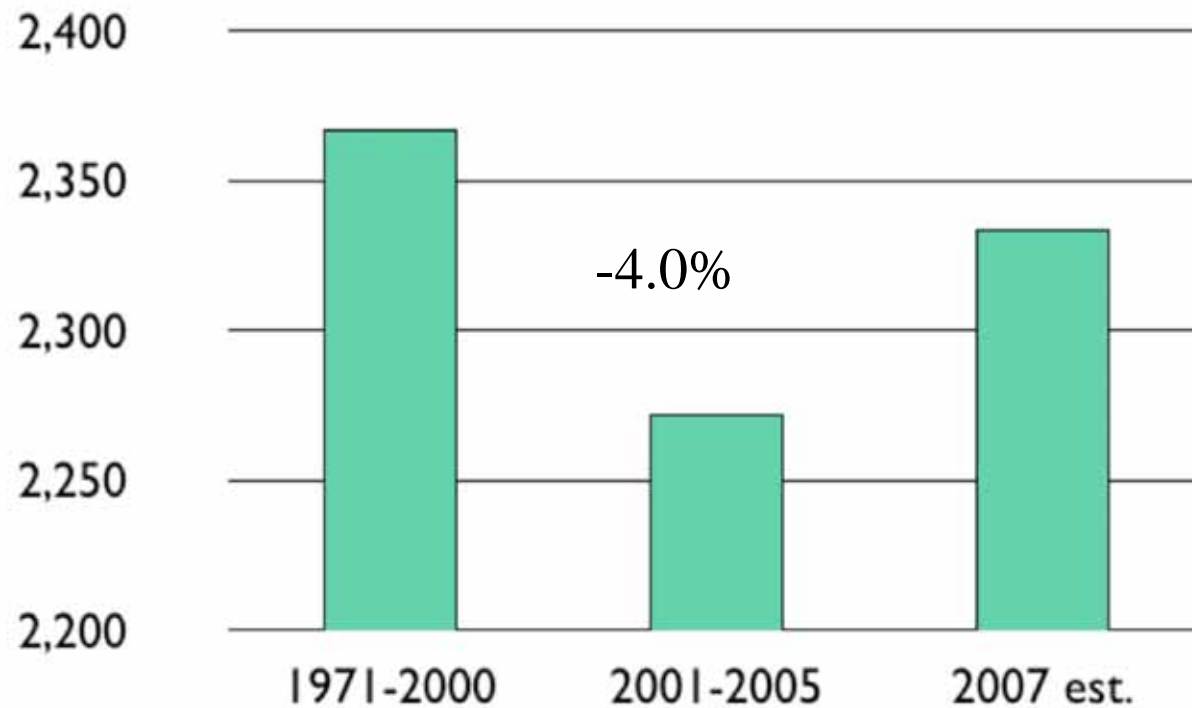
1950

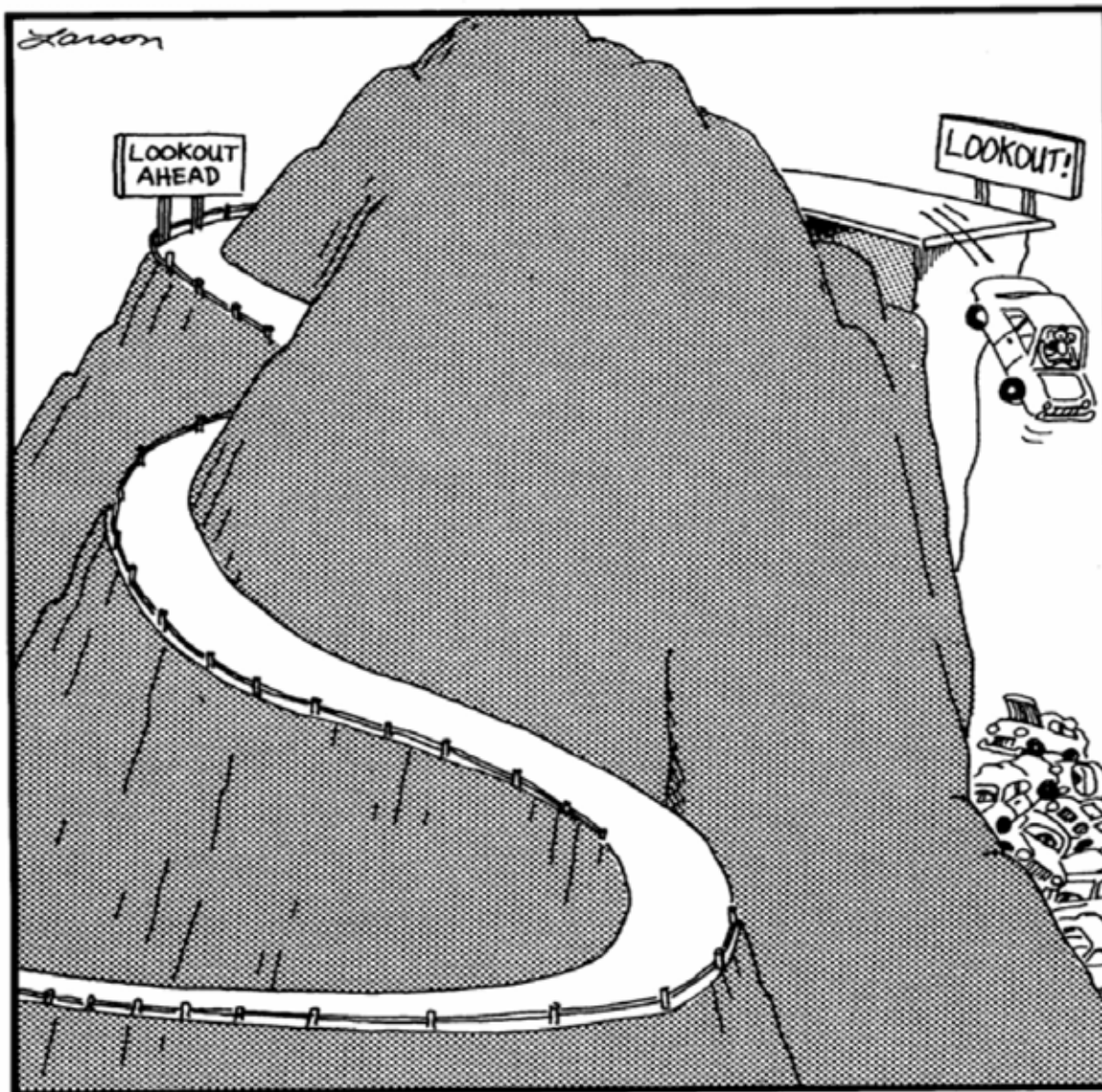
1970

1990

2010

Predicting HDD for Bellingham





Oregon

- Early action on mitigation - 1992 Portland emissions goals, 1997 energy siting bill;
- Adaptation: Portland Water Bureau study
- 2004 consensus statement on climate change
- 2007 HB 3543 created OGWC and OCCRI

Oregon

- 2004 global warming strategy: "The Advisory Group believes the next task ... will be to identify adaptation actions, set an adaptation strategy and implement it... the Governor [should] assemble a successor group ... to take on this next great challenge."
- 2006 Gov Kulongoski created Governor's Climate Change Integration Group - mitigation + adaptation
- 2008 CCIG report - Recommended actions: 1) prevention 2) prioritize the vulnerable; 3) agencies should plan 4) redesign planning tools 5) plan at larger scales; 6) link preparation to economic development; 7) limit non-climate stress 8) adaptive management processes 9) develop capacity and new forms of governance 10) finance mechanisms and funding opportunities 11) coordinate research agendas across states and regions (OCCRI)

Preparing Oregon's Fish, Wildlife, and Habitats for Future Climate Change: *A Guide for State Adaptation Efforts*

Subcommittee on Fish, Wildlife, and Habitat Adaptation
Oregon Global Warming Commission



Forests, Carbon and Climate Change

A SYNTHESIS OF SCIENCE FINDINGS



CLIMATE READY COMMUNITIES

Strategy for Adapting to Impacts of
Climate Change on the Oregon Coast

Oregon Coastal Management Program
Department of Land Conservation and Development

9



Rapid Climate Change



Oregon - now

- Interagency coordination
- DLCD land use
- ODOT planning
- shorelines hazard mapping and planning

Beach and Dune Hazard Zones Derived for Tillamook County



(after Allan and Priest, 2001)

Beach and Dune Hazard Zones Derived for Tillamook County



09/09/09

(after Allan and Priest, 2001)

Steps to adaptation

- Awareness - WA ✓ OR ✓
- Analysis - WA ✓ OR ✓
- Action - WA ~ OR ~



"I'd chalk it up to just another crazy backyard hobby, except that he's the world's leading authority on global warming."

Obstacles to action

- Scientific - level of detail
- Political - no natural constituency
- Technical - need new methods (death of stationarity)
- Psychological - short-term focus, skewed view of risk

Making the best of global warming

